

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

**PATENT
PA000001****REMARKS**

In the Office Action, the Examiner noted that claims 11-26 are pending in the application and that claims 11-26 stand rejected. By this response claims 11, 17 and 21 are amended to more clearly define the invention of the Applicant and not in response to prior art.

In view of the amendments presented above and the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. Thus the Applicant believes that all of these claims are now in allowable form.

Rejections**A. 35 U.S.C. § 102**

The Examiner rejected claims 11-23, 25 and 26 under 35 U.S.C. § 102(b) as being anticipated by Logan et al. (U.S. Patent 5,371,551, hereinafter "Logan"). The rejection is respectfully traversed.

The Examiner alleges that regarding claims 11 and 17, Logan teaches a digital video system including all of the elements of the Applicant's claims 11 and 17. The Applicant respectfully disagrees.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Holst & Derrik Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant submits that the Logan reference fails to teach, suggest or disclose each and every element of the Applicant's invention at least as recited in the Applicant's independent claims, of which claim 11 specifically recites:

"A digital video recorder comprising:
an encoder of a first analog signal into a first digital stream;
a decoder of a second digital stream into a second analog signal;
a medium interface for reading and recording on a medium;
at least one digital source outputting a third digital stream; and,
a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface,
wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that the first digital stream from the encoder is able to be**

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

communicated to the decoder without prior recording.” (emphasis added).

The Applicant's invention is directed at least in part to a digital video recorder including at least an analog source and a digital source where a received analog signal is encoded by an encoder. In the invention of the Applicant, a multiplexer is connected to both the encoder and to the digital source. The multiplexer is also connected to a medium interface for recording and reading on a medium and to a digital decoder linked to a display. The Applicant's invention enables a video recorder to independently record and monitor any of the sources and further a pre-recorded signal. More specifically, in support of the invention, at least as claimed by the Applicant's claims 11 and 17 recited above, the Applicant in the Specification, specifically recites:

“The digital streams from the digital source 14 and from the digital encoder 16 are coded according to the same format, which may be for instance the widely-used MPEG-II format. The digital encoder 16 on the one hand and the digital source 14 on the other hand are connected to two distinct inputs of a multiplexer 18.

The multiplexer 18 is also connected via a bi-directional link to a medium interface 20. The medium interface 20 is able to convert the coded digital stream into a bit stream to record it on a medium. For instance, in a digital VCR, the medium interface 20 comprises a drum carrying magnetic heads in order to record the bit stream on a magnetic tape according to the D-VHS format. In the reverse way, the medium interface 20 can read a bit stream from the pre-recorded medium and convert it into a digital stream coded according to a specific format, like MPEG-II, and output the digital stream on the bi-directional link.

An output of the multiplexer 18 is connected to a digital decoder 22. The digital decoder 22 is able to convert a coded digital stream (for instance a MPEG-II stream) into an analog signal to be displayed on a display 25.” (See Applicant's Specification, page 4, lines 11-27).

The Applicant, in the Specification, further recites:

“The multiplexer 18 whose constitution will be detailed below allows to record and display independently any of the video signals from the analog source 12 and the digital source 14. Of course, it also allows to display a pre-recorded video signal.

As can be seen from figure 3 and as already explained, the multiplexer 18 has two separate inputs 22, 24 for receiving each a coded digital video stream. The input 22 is connected to the output of the digital

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

encoder 16 and the input 24 is connected to the output of the digital source 14. The multiplexer 18 has an output 28 connected to the digital decoder 22. The multiplexer 18 is also connected at point 26 to the medium interface 20 via the bi-directional link.

The multiplexer 18 comprises a first switch 30 and a second switch 32. The first switch 30 allows to selectively link point 26 to input 22 or to input 24. The first switch 30 consequently allows to choose which video signal (among video signal from the analog source 12 and video signal from the digital source 14) should be sent to the medium interface 20 for recording.

The second switch 32 allows to selectively connect output 28 to input 22, to input 24 or to point 26. The second switch 32 thus allows to choose which video signal is to be decoded in decoder 22 and displayed on display 25 among video signal from the analog source 12 (input 22) and video signal from the digital source 14 (input 24), independently of the possible recording of one of these signals. The second switch 32 also allows to display a pre-recorded signal read from the medium interface 20 during play-back (point 26)." (See Applicant's Specification, page 4 line 34 through page 5, line 19).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention includes at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that a signal from the encoder is able to be communicated to the decoder without prior recording**" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17. (emphasis added).

The Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Logan for a digital video recorder including at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that a signal from the encoder is able to be communicated to the decoder without prior recording**" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17.

In contrast to the invention of the Applicant, Logan specifically teaches an encoder of a first analog signal into a first digital stream (Fig. 1, 4b); a decoder of a second digital stream into a second analog signal (Fig. 1, 8); a medium interface

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

for reading and recording on a medium (Fig. 1, 5); at least one digital source outputting a third digital stream (Fig. 1, 4a); a multiplexer coupled to the encoder and to the digital source and to the medium interface (Fig. 1, 3). However, as shown in Fig. 1 of Logan, the multiplexer (3) is not coupled directly to the decoder (8). From Fig. 1 and the description in column 3, lines 20 to 23 it can clearly be derived that the decoder (8) is only coupled to the medium interface (5) and to a display unit (10). Consequently, the multiplexer cannot comprise a first switch, which selectively couples the decoder directly to the encoder or to the digital source such that the first digital stream from the encoder is able to be communicated to the decoder without prior recording as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11, 17, and 21.

Furthermore, in column 4, lines 14 to 39 referring to Fig. 2 of Logan, it is explicitly stated that one or more available incoming video signals are selected, digitized, compressed and recorded in the memory system. The user then selects a location in the memory system from which programming is to be read. The retrieved signal is decompressed, transformed into an analog signal and displayed on the display unit. This means that in order to be able to record one signal while watching another signal, the memory system must on the one hand be capable of recording at least two signals at the same time, and on the other hand allow for simultaneous recording and playback. This is not the case for the digital video recorder according to at least the Applicant's claims 1, 17, and 21, which allows the transfer of a signal encoded by the encoder directly to the decoder without prior recording. The feature of additionally coupling the multiplexer to the decoder allows the use of a much simpler medium interface.

More specifically, Logan does not teach, suggest or anticipate a digital video recorder including at least an encoder, a decoder, a medium interface, a digital source and "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder directly to the encoder or to the digital source such that a signal from the encoder is able to be communicated to the decoder without prior recording" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17.

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

The claimed structure of the Applicant's invention enables a video recorder in accordance with the Applicant's invention to independently record and monitor any of the sources and a pre-recorded signal.

In contrast to the invention of the Applicant, at least with respect to independent claims 11 and 17, Logan teaches in at least col. 4, lines 14 to 39 (referring to Fig. 2) that one or more available incoming video signals are selected, digitized, compressed and recorded in the memory system. Logan further teaches that a user then selects a location in the memory system from which programming is to be read. The retrieved signal is then decompressed, transformed into an analog signal and displayed on the display unit. This indicates that in order to be able to record one signal while watching another signal, the memory system must on one hand be capable of recording at least two signals at the same time, and on the other hand allow for simultaneous record and playback. This is in contrast to the Applicant's invention where a signal from the encoder is able to be communicated directly to the decoder without prior recording as necessary in Logan.

As such and for at least the reasons described above and specifically that Logan does not teach, suggest or anticipate a digital video recorder including at least an encoder, a decoder, a medium interface, a digital source and "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that a signal from the encoder is able to be communicated to the decoder without prior recording**" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11 and 17, the Applicant respectfully submits that Logan fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claims 11 and 17 as required for anticipation, and that therefore the teachings and disclosure of Logan do not anticipate the Applicant's invention, at least with respect to independent claims 11 and 17.

Therefore, the Applicant submits that for at least the reasons recited above independent claims 11 and 17 are not anticipated by the teachings of Logan and,

CUSTOMER NO.: 24498

Serial No. 09/748,947

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT

PA000001

as such, fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Likewise, independent claim 21 recites similar relevant features as recited in the Applicant's independent claims 11 and 17. More specifically, claim 21 recites "means for communicating the first digital stream directly from the encoder to the decoder without prior recording." However, there is absolutely no teaching, suggestion or disclosure in Logan for means for allowing the decoder to decode the first digital stream without prior recording. For allowing the decoder to decode the first digital stream, the output of the multiplexer (3) of Logan would have to be directly coupled to the decoder (8) as in the invention of the Applicant, however this is not so in Logan. As such, the Applicant submits that for at least the reasons recited above independent claim 21 is also not anticipated by the teachings of Logan and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 12-16, 18-20, 22-23, 25 and 26 depend either directly or indirectly from independent claims 11, 17 and 21 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 12-16, 18-20, 22-23, 25 and 26 are also not anticipated by the teachings of Logan. Therefore the Applicant submits that dependent claims 12-16, 18-20, 22-23, 25 and 26 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 102

The Examiner rejected claims 11, 17, 21 and 24 under 35 U.S.C. § 102(b) as being anticipated by Rigatti (U.S. Patent 6,614,984). The rejection is respectfully traversed.

The Examiner alleges that regarding claims 11, 17, 21 and 24 Rigatti teaches a digital video system including all of the elements of the Applicant's claims. The Applicant respectfully disagrees.

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

The Applicant submits that the Rigatti reference fails to teach, suggest or disclose each and every element of at least the invention as recited in at least the Applicant's independent claims 11, 17 and 21.

The Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Rigatti for "an encoder of a first analogue signal into a first digital stream" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 21. More specifically, Rigatti teaches a universal data storage device, comprising: an encoder of a first analog signal into a first digital stream (Fig. 5, 5); a decoder of a second digital stream into a second analog signal (Fig. 5, 6); a medium interface for reading and recording on a medium (Fig. 5, 1); at least one digital source outputting a third digital stream (Fig. 5, 15); and a multiplexer coupled to the encoder and to the digital source and to the medium interface (Fig. 5, 14).

However, in the description in column 3, lines 51 to 54 it is clearly stated that the decoder (6) is only coupled to the medium interface (1), and that there is no direct coupling between the encoder (5) and the decoder (6). Consequently, the multiplexer does not comprise a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source such that the first digital stream/a signal from the encoder is able to be communicated to the decoder without prior recording. As such, the Applicant respectfully submits that at least claims 11, 17, and 21 are not anticipated by Rigatti.

Even further, from column 3, lines 65 to column 4, line 19 of Rigatti, it is clear that only one incoming signal is selected, digitized, and recorded in the memory system. When the user selects data to be read from the memory system, the retrieved signal is format converted, transformed into an analog signal and output via an output. There is no indication whatsoever that the data storage device disclosed by Rigatti is able to record one signal while playing back another signal received at an input. Even if this should be the case, the memory system would on the one hand have to be capable of recording at least two signals at the same time, and on the other hand allow for simultaneous recording and playback. This is not the case for the digital video recorder according to the Applicant's claims 1, 17, and 21, which allows the transfer of a signal encoded by the encoder

CUSTOMER NO.: 24498**Serial No. 09/748,947**

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

PATENT**PA000001**

directly to the decoder without prior recording. The feature of additionally coupling the multiplexer to the decoder in the invention of the Applicant hence allows for the use of a much simpler medium interface. Since Rigatti does not teach, suggest or anticipate at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that a signal from the encoder is able to be communicated to the decoder without prior recording**" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11, 17 and 21, the Applicant respectfully submits that Rigatti fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claims 11, 17 and 21 as required for anticipation, and that therefore the teachings and disclosure of Rigatti do not anticipate the Applicant's invention, at least with respect to independent claims 11, 17 and 21.

As such and for at least the reasons described above and specifically that Rigatti does not teach, suggest or anticipate a digital video recorder including at least "a multiplexer coupled to the encoder and to the decoder and to the digital source and to the medium interface, wherein the multiplexer comprises a first switch, which selectively couples the decoder **directly** to the encoder or to the digital source **such that a signal from the encoder is able to be communicated to the decoder without prior recording**" as taught in the Applicant's Specification and claimed by at least the Applicant's claims 11, 17 and 21, the Applicant respectfully submits that Rigatti fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claims 11, 17 and 21 as required for anticipation, and that therefore the teachings and disclosure of Rigatti do not anticipate the Applicant's invention, at least with respect to independent claims 11, 17 and 21.

Therefore, the Applicant submits that for at least the reasons recited above independent claims 11, 17 and 21 are not anticipated by the teachings of Rigatti and, as such, fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

CUSTOMER NO.: 24498

Serial No. 09/748,947

Reply to Office Action dated: 08/24/05

Response dated: 10/21/05

**PATENT
PA000001**

Furthermore, dependent claim 24 depends directly from independent claim 21 and recites additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claim 24 is also not anticipated by the teachings of Rigatti. Therefore the Applicant submits that dependent claim 24 also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

Conclusion

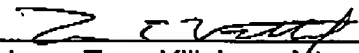
Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,
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